

SECRET (When filled in)

QUESTIONNAIRE

Name

[Redacted Name]

Phone Ex.

[Redacted Phone Extension]

Office

[Redacted Office]

Branch

[Redacted Branch]

Educational History

[Redacted Educational History]

Preferred day of month

1st Monday

☒

1st Friday

☐

Other

☐

1. In which topical areas do you feel the strongest?

[Redacted Topical Areas]

2. In which topical areas do you feel the weakest?

[Redacted Topical Areas]

3. What further topical areas would you suggest for inclusion, if any?

*None*

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<b>TRANSMITTAL SLIP</b>		DATE
TO: DD/ORD		
ROOM NO. 606	BUILDING Ames	
REMARKS:		
FROM: D/OSP		
ROOM NO. 6B-00	BUILDING Hqs.	EXTENSION
FORM NO. 241 1 FEB 55		REPLACES FORM 36-8 WHICH MAY BE USED.

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SENDER WILL CHECK CLASSIFICATION OF AND BOTTOM			
UNCLASSIFIED		CONFIDENTIAL	SECRET
OFFICIAL ROUTING SLIP			
TO	NAME AND ADDRESS	DATE	INITIALS
1	OC-R&D	31 MAR 1970	P
2			
3	DD/S+T/ORD		
4			
5			
6			
ACTION		DIRECT REPLY	PREPARE REPLY
APPROVAL		DISPATCH	RECOMMENDATION
COMMENT		FILE	RETURN
CONCURRENCE		INFORMATION	SIGNATURE
Remarks: another input for your lecture series.			
FOLD HERE TO RETURN TO SENDER			
FROM: NAME, ADDRESS AND PHONE NO.			DATE
OC-SCD 806 Ames Bldg.			03/09/70

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MEMORANDUM  
OF CALL

TO: \_\_\_\_\_

☐ YOU WERE CALLED BY— ☐ YOU WERE VISITED BY—

OF (Organization) \_\_\_\_\_

☐ PLEASE CALL → PHONE NO. \_\_\_\_\_  
CODE/EXT. \_\_\_\_\_  
☐ WILL CALL AGAIN ☐ IS WAITING TO SEE YOU  
☐ RETURNED YOUR CALL ☐ WISHES AN APPOINTMENT

MESSAGE

*Sent copy to:*



*on 3/20/70*

RECEIVED BY	DATE	TIME

STANDARD FORM 63  
REVISED AUGUST 1967  
GSA FPMR (41 CFR) 101-11.6

GPO: 1968 O-318-527

63-108

SENDER WILL CHECK CLASSIFICATION TOP AND BOTTOM			
UNCLASSIFIED		CONFIDENTIAL	SECRET
OFFICIAL ROUTING SLIP			
TO	NAME AND ADDRESS	DATE	INITIALS
1	<div></div>		
2			
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	ACTION	DIRECT REPLY	PREPARE REPLY
	APPROVAL	DISPATCH	RECOMMENDATION
	COMMENT	FILE	RETURN
	CONCURRENCE	INFORMATION	SIGNATURE
Remarks:			
FOLD HERE TO RETURN TO SENDER			
FROM: NAME, ADDRESS AND PHONE NO			DATE
<div>TRAVEL</div>			<div>19/12/78</div>

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Month	Topical Area	E/M, optics, biomedical, acoustics, seismics, human factors Intelligence Class Problem Groups
1	Complex Variables, vector analysis, operators, matrix operations, related material	basic, first session introductory--sample signals
2	Operational Calculus, integration; matrices; line integrals; Rieman space; common operators	basic; review--sample signals
3	Elementary Probability, Stieltjes Integral, common distributions, histograms, independence, tests for dependence, averaging, clipped data, analog data, stationarity	noise models, signal models; zero crossover, amplitude uncertainty, quantization, sampling
4	Applied Engineering Statistics, signal detection probability, conditional probability, common distribution, switching, prediction, filtering parameters, moments	noise models for environments, processors, source inputs
5	Correlation, discrete and continuous, cross correlation tests, goodness of fit, significance, tau translation benefits, reconciliation of statistical approach, orthogonality, independence, error analysis	noise models, signal models, approximation
6	Transforms, Fourier, Walsh, Laplace, clipping, analog, digital data, Z transforms Tou transforms	transient and steady state responses, noise estimates
7	Transforms, Hilbert, Fresnel, common kernel integrals	spectrum shading, multipath transmissions, media
8	Servo System Analysis, flow analysis, sensitivity, feedback, transfer function, impulse response, error representation, statistical approach, smoothing and filtering, prediction, compensation input/output relations	signal input/output consider- ation, collection analysis techniques control systems, guidance devices
9	Fields and Wave Phenomena, array configuration, gain, spacing, shading, phase, signal/noise matrices, near fields, far fields	arrays for sensors, sidelobe exploitation, notching, spatial filtering, ranging, localization, holography, lens design, matched filters
10	Detection/Optimization, detection theory, tests, criteria, minimax, likelihood ratio, false alarms/dismissals, Wiener-Hopf filters, optimum recovery, sequential	detection devices, operator aids
11	Bayesian Statistics, error probabilities, average cost minimizing, thresholding, complex nets	PR devices, ATR state definition, event indicators, system design
12	Modulation, am, fm, ppm, pam, pcm, digital, noise immunity, common error codes, redundancy, error rate estimates, error codes, fading channels	telemetry, coding, data transmission, security

(Please rate 1-10 where indicated. If less than 5, space is available for comment.)

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## FORM

RATING

1. Format of the course was intended to accommodate to a 5% time committmant and to provide for a full day class treatment of a particular topical area.

Alternatives: 1 day/ month is adequate

2. The point of the applications session was to illustrate where current course material was utilized in the real world.

Applications speakers and topics

3. The purpose of the homework was to excercise topical material with about 8 hours of work.

Recommend: 3 one-hour problems  
20 10-min. problems

4. The goal of the intermediate 2-hr. session was to give a "keep-alive" excercise inthe topical area.

Recommend: Probl.-solving session  
Second applications session

5. The class was intended to be weighted towards a blackboard-pictorial development in order to convey math concept more readily.

Diagrammatic presentation

6. The symbology of various systems disciplines is confusing due to the separate source developments. An effort at consistency was made in order to permit cross interpretation within the technical literature.

Symbology

7. The intent of notes and handout material furnished throughout the month was to tie course topics to technical papers.

Effectiveness of handouts

8. General impedimenta such as same room, same day/month, same format, etc.

9. The course was designed to present a semi-unitary approach to several disciplines:

Communications

Optics

Acoustics

Hum. Eng. & Biomed.

Seismics

Pictorial

Computer Technology

11. The course material was split 50% basic mathtools and 50% in commonality subsystems. (Those subsystems pervasive in designs across disciplines) The sequence was that recommended by ASEE for math modelling related to several fields.

Balance of material

Total content

12. Session I; Vectorial Representation: matrices, num. analysis, linear systems, sampling, manipulation

13. Session II; Transforms: convolution, Fourier and Laplace transformations, Z transforms, impulse response, numerical anal.

14. Session III; Probability and Statistics: random var., expectancy, density functions, distributions, confidence limits.

15. Session IV; Stochastic Variable: stationarity, ergodicity, moments, correlation, power spectral density, white noise, square law detection.

16. Session V; Signal Detection: value, cost, likelihood ratio detection, Bayes Law.

17. Session VI; Detector Subsystems: receiver operating characteristics, detection situations, S/N ratio, data smoothing and prediction

18. Session VII; Detector Subsystems II: non-white noise, whitening, matched filtering, threshold, detectability Markov chains

19. Session VIII; Spatial Processing I: space-time relationships, spatial filtering, correlation matrix for signal and noise.

20. Session IX; Spatial Processing II: optimum array, shading, optimum filtering, lobe periodicity

21. Session X; Servomechanisms and Control: closed loop systems, regulation, feedback, root locus, stability criteria, bang-bang systems.

22. Session XI; Modulation: analog modulation, AM, FM, PM, suppressed band modulation, effects of index of modulation noise immunity.

23. Session XII; Modulation: PPM, PWM, PCM, error correction codes, noise immunity, entropy

massive  
green

1

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entry and come and sitting out. The purpose of the room  
are in response put in the room - to advise the cell  
how well they

2

length how much time for the day.

3

about 12 times did you feel worse

How soon

4

the way for that which was related to the

while

was on

focus was

each one

5

what the committee drops here

other committee

general

George —

Here is a brief outline of the talk  
for March 12

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Title: Methods & Applications of Modern  
Control Theory

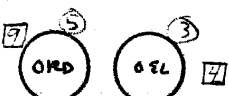
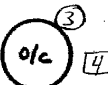






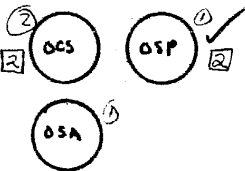


- Topics:
- 1) Methods of Optimal Control. An example of how this theory has been applied to optimizing aircraft trajectories will be given
  - 2) Kalman Filtering and its application to Inertial Navigation Systems.
  - 3) Soviet work in Modern Control System Theory & Application

~~Time:~~

Date & Time: 12 March 1971, 1300-1500

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ENG. SYST. ANALYSIS COURSE  
(TOTAL CLASSES 36)

DD/S & T	DD/S	DD/P	DD/I	RO & E CATEGORY
20	16			
(A) 	(B) 			
(C) 	(D) 			
(E) 				

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Freshman Engineering Design  
West Virginia University

Course Evaluation Questionnaire

- X 1. The small group discussion of the design work was
- a. Very helpful  
b. Fairly helpful  
c. Useful  
d. No help
- Comments
- X 2. My group had \_\_\_\_\_ members. For effectiveness, I would have preferred my group to be
- a. the same size  
b. smaller, that is \_\_\_\_\_ members.  
c. larger, that is \_\_\_\_\_ members.
3. The presentation of theoretical material by the written programmed instruction read at home was
- a. Very helpful  
b. Fairly helpful  
c. Useful  
d. No help
- Comments
- X 4. The experiments associated with each section of theoretical material were
- a. Very helpful  
b. Fairly helpful  
c. Useful  
d. No help
- Comments
- X 5. Would more experimental material associated with the programs be desirable?
- Yes                      No                      OK, as is
- X 6. Would you prefer more projects which require fabrication of models?
- Yes                      No                      OK, as is ,
7. If I had to choose one teaching method for learning the theoretical material, it would be
- a. Discussing with the whole class  
b. Discussing within a small group  
c. Reading programmed instruction  
d. Reading a textbook  
e. Listening to lectures  
f. Performing experiments

8. If I could choose a combination of methods for learning the theoretical material, I would choose (specify using letters to identify those methods given above, or write out your own choice of other methods).

9. What in your opinion was the basic objective of this course?

10. Do you think that what you learned in this course was

- a. Worthwhile
- b. Interesting
- c. Nice
- d. A waste

Comments

11. In the space provided below, list the courses you are presently taking. Rank these courses by number using 1 to indicate the course you like the best, 2 next best, etc., in the space to the right.

Course

Rank

_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

12. The questions in the written programmed material were

- a. Challenging
- b. Interesting
- c. OK
- d. Repetitious
- e. Boring

Comments

13. In this course we have related the theoretical material to a design problem. Do you think this teaching-learning technique is

- a. A really good idea
- b. A good idea
- c. OK
- d. No better than other methods

Comments

14. A set of content-performance objectives is given at the end of each section of the programmed instruction. Did you regularly read

- a. All these objectives
- b. Most of these objectives
- c. Some of these objectives
- d. None of these objectives

Comments

*hard to read*  
*paper*  
*drawn*

15. When reading the written programmed instruction, did you cover the printed answer and either think or write your answer to each question before you looked?

- a. Yes, all the time
- b. Yes, most of the time
- c. Yes, some of the time
- d. No

16. Did you find it easier to stick to the job of studying the programmed instruction at home than you usually do with a text or lecture notes?

- a. Yes, all the time
- b. Yes, most of the time
- c. Yes, some of the time
- d. No

Comments

17. To me, this course (is)

- a. Boring and trite
- b. Creates little or no interest
- c. Creates occasional interest
- d. Inspiring, enthusiastic
- e. Highly motivating, challenging

Comments

18. Practicality of Course

- a. Strong emphasis on usefulness and value of material
- b. Some emphasis on application and usefulness
- c. Only occasional examples of application
- d. Emphasis on theory and fact
- e. Strong emphasis on theory

19. If you had a choice of class style, which of the following would you prefer the most?

- a. Organized like this one
- b. Based on the professor's lectures
- c. Based on lectures and a textbook
- d. Based on programmed instruction
- e. Lecture with open class discussion (not small groups)

Comments

20. Taking an examination as many times as required until you pass it is \_\_\_\_\_.

- a. An excellent idea
- b. A good idea
- c. A fair idea
- d. A poor idea
- e. A bad idea

Comments

21. When it is time for this class do you usually \_\_\_\_\_.

- a. Eagerly look forward to attending
- b. Look forward to attending
- c. Attend with the same enthusiasm you show other classes
- d. Aren't too thrilled about attending
- e. Don't look forward to attending at all

22. Do you think your classmates usually \_\_\_\_\_.

- a. Eagerly look forward to attending
- b. Look forward to attending
- c. Attend with the same enthusiasm they show other classes
- d. Aren't too thrilled about attending
- e. Don't look forward to attending at all

23. Organization of Course

- a. Exceedingly well organized
- b. Well organized
- c. Reasonably well organized
- d. Poor organization
- e. Confusing and illogical

Comments

24. Demand on Students' Thinking

- a. Demands logical, independent thought
- b. Usually encourages rational thinking
- c. Requires some unnecessary memorization
- d. Frequent unnecessary memorization
- e. Discourages independent thought

Comments

25. A program, objectives and problems were assigned as homework. How often did you do each of these assignments before the next class period?

Read program  
Fill out objectives sheet  
Attempt problems

Always	Most of time	Occasionally	Never

26. Examinations

- a. Bear no relation to expected achievement
- b. Contain obscure and tricky questions
- c. More emphasis on facts than understanding
- d. Good coverage of important material
- e. Excellent measure of expected objectives

Comments

27. The Homework Problems were

- a. A total waste of time
- b. Mostly routine busy work
- c. Sometimes useful
- d. Helpful, worthwhile, well planned
- e. Challenging, interesting

Comments

28. The Project Reports were

- a. A total waste of time
- b. Mostly routine busy work
- c. Useful
- d. Worthwhile
- e. An important part of the design

29. Complete the following thought. If I were teaching this course . . .

30. Complete the following thought. The one thing about this class I would like to change is . . .

31. What was the most interesting, useful and worthwhile feature of the course and the instructor's management of it?

32. What was the most frustrating, disagreeable and useless aspect of the course and its operation?

33. My overall evaluation of this course is that it has been . . .

- a. An excellent experience
- b. A good experience
- c. About as good as my other classes
- d. A poor experience
- e. Of no value

34. Have you ever had a course in mechanical drawing? Yes No  
If yes, how much? 1 semester 2 semesters 3 semesters 4 semesters

35. Compared to this design class, do you feel that a course in drawing is

- a. equally important
- b. more important
- c. less important
- d. no opinion

36. Would you have preferred

- a. more (and shorter) projects
- b. fewer (and longer) projects
- c. satisfactory number, as is.

37. Would you have preferred to have done some of your projects individually as opposed to in groups?

Yes No Don't know

Comments

38. Do you think that it is a good idea that you grade your own reports?

Yes No

If no, suggest some alternate scheme for evaluating your reports.

39. In this course we have considered three projects.

- a. Native Housing
- b. Middle project
- c. Epidemic

1) The project I liked best was (Why?)

2) The project I liked least was (Why?)

40. You were asked to rewrite examinations until you demonstrated a minimum ability in the tested area. Do you prefer this examination procedure to the normal one time only procedure?

Yes No

41. What effect did this course have on your understanding of the role of an engineer?

42. If we haven't asked the question you wanted, make up your own question and answer it here and on the back of this page.